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December 24, 1997

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VIA HAND DELIVERY

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

Re: Ex Parte Presentation
In the Matter Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service;
MM Docket No. 87-268

Dear Ms. Salas:

Tribune Broadcasting Company ("Tribune") hereby notifies the Commission that Mr. Charles Rhodes, a consultant to Tribune, spoked with Mr. Robert Eckert of the Office of Engineering and Technology on December 17, 1997, regarding the method to translate Threshold to Visibility ("Tov") interference data into CCIR 3 interference data. Mr. Rhodes forwarded a copy of the attached letter and accompanying tables to Mr. Eckert following his telephone conversation.

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In accordance with the Commission's Rules, two copies of this letter and attachment are being filed with the Secretary for inclusion in the public record of this proceeding.

Sincerely,

Thomas Van Wazer /ejs

Thomas P. Van Wazer

Attachment

cc: Robert Eckert

Charles W. Rhodes
10105 Howell Drive
Upper Marlboro, Md. 20774
Tel: (301) 574 0214
Fax: (301) 574 1978
e-mail: charleswrhodes@worldnet.att.net

Mr. Bob Eckert
c/o FCC
by Telecopier:
202-418-1918
To clarify our phone discussion this week:

The attached Tables 3 for sideband splatter from the Upper Adjacent channel at the limit of the the RF Mask, and Table 4 for the Lower Adjacent channel show the computed difference in psycho-visually weighted noise power of 4.11 dB.

You will recall that the ATTC subjective tests showed a 4.00 dB difference in Tov for these two cases, excellent agreement between theory and practice.

The Final Report of the ATTC, (page III-39) gives Figure 13 and Table 19 for co-channel DTV into NTSC. From that data it is seen that difference between CCIR 4.5 (Tov) and CCIR 3 is 13 dB. In this experiment, NTSC power was -55 dBm and the U level was -91 dBm for the DTV signal, a D/U of 36 dB. The DTV signal, as a co-channel interferor is "white noise" while sideband splatter from n-1 and from n+1 are non-white, and complementary in their spectra. Therefore it is reasonable to assume that the difference in weighted Tov of 4 dB comes from this fact. From that, we can postulate that had ATTC measured Tov for co-channel DTV into NTSC, the result would have been a D/U of +9.33 dB. Now we can convert from Tov to CCIR-3 by subtracting 13 dB from 9.33 dB getting - 3.67 dB which should be corrected for the reduced weighting for n+1 to get - 1.67 dB D/Uw. For the n-1 case, we get a D/Uw= - 5.67 dB.

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The FCC Planning Factor for n-1 is -17.43 dB, the error is 11.76 dB. For n+1: -11.95 dB is the Planning Factor and the error is 6.28 dB.

Cordially, Charlie Rhodes

Charlie

Table 4: Weighted Signal-To-Noise in N – 1

Assumed NTSC ERP 37 dBK
Assumed DTV ERP 25 dBK (see text)

DTV Power Per 500 KHZ:
–10.3 dB

DTV Power +14.7 dBK

Freq. (MHz)	Atten. dB	Wtd. Atten. dB	Wtd. Power (dBK)	Wtd. Power kW
5.75	57.96	–85.38	–70.68	nil
5.25	54.14	–66.69	–51.99	0.000 006
4.75 (Fv)	50.67	–53.43	–38.73	0.000 134
4.25	47.54	–49.11	–34.41	0.000 362
3.75	44.77	–44.77	–30.07	0.000 984
3.25	42.34	–43.17	–28.47	0.001 422
2.75	40.25	–44.36	–29.66	0.001 081
2.25	38.52	–47.43	–32.73	0.000 533
1.75	37.13	–49.25	–34.55	0.000 351
1.17 (Fsc)	35.95	–41.72	–27.02	0.001 986
0.59	35.24	–49.61	–34.91	0.000 323

Total Weighted Noise Power in (N – 1) 0.006 182 kW
–22.09 dBK

Peak NTSC Visual Power 37.0 dBK
Total Weighted Noise Power –22.09 dBK

Signal-to-Weighted Noise (N + 1) 59.09 dB

Threshold of Visibility, Weighted Noise in an NTSC channel 57.3 dB
Noise Margin (N + 1) 1.8 dB

Table 3: Weighted Signal-To-Noise in N + 1

Assumed NTSC ERP 37 dBK
Assumed DTV ERP 25 dBK (see text)

DTV Power Per 500 KHZ: −10.3 dB

DTV Power +14.7 dBK

Freq. (MHz)	Wtd. Atten. dB (Table 2)	Wtd. Power (dBK)	Wtd. Power kW
0.25	62.46	−47.76	0.000 017
0.75	47.61	−32.91	0.000 512
1.25 (Fv)	38.85	−24.15	0.003 846
1.75	38.84	−24.14	0.003 855
2.25	38.16	−23.46	0.004 508
2.75	41.08	−26.38	0.002 301
3.25	46.46	−31.76	0.000 667
3.75	53.68	−38.98	0.000 126
4.25	59.69	−44.99	0.000 032
4.83 (Fsc)	56.97	−42.27	0.000 059
5.41	69.70	−55.00	0.000 003

Total Weighted Noise Power in (N + 1) 0.015 926 kW
−17.98 dBK

Peak NTSC Visual Power 37.0 dBK
Total Weighted Noise Power −17.98 dBK

Signal-to-Weighted Noise (N + 1) 54.98 dB

Threshold of Visibility, Weighted Noise in an NTSC channel 57.3 dB
Noise Margin (N + 1) ➡ 2.3 dB

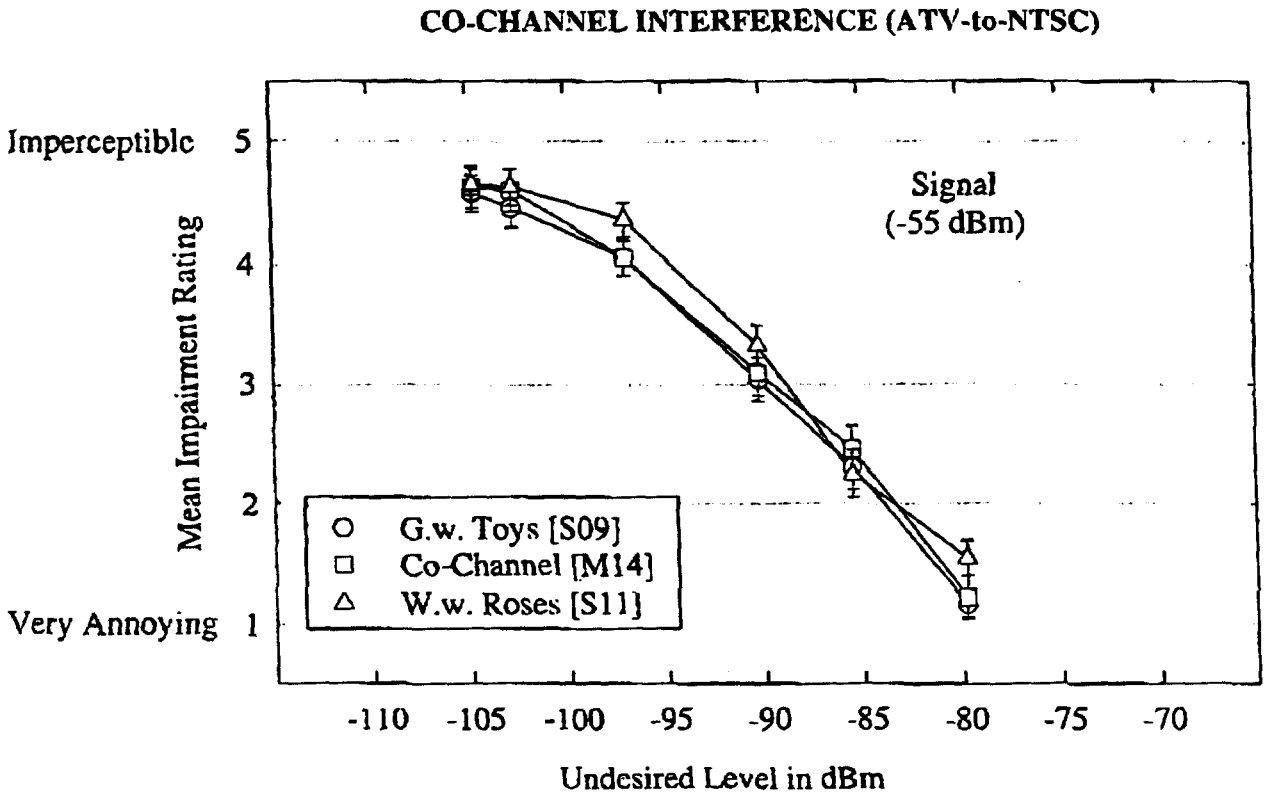

FIGURE 13. Mean impairment ratings for Co-Channel Interference tests for the *digital* Grand Alliance HDTV System.

TABLE 19
CO-CHANNEL INTERFERENCE (ATV-to-NTSC)
PARAMETERS

DESIRED LEVEL	PICTURE	4.0 LEVEL		3.0 LEVEL FOR SPECTRUM PLANNING	
		MEAN RATING	CONFIDENCE INTERVAL	MEAN RATING	CONFIDENCE INTERVAL
SIGNAL -55 dBm (WEAK)	G. w. TOYS (S09)	-96.61	±1.61	-90.00	±1.20
	CO-CHANNEL (M14)	-96.59	±1.54	-89.52	±1.43
	W. w. ROSES (S11)	-94.61	±1.40	-88.81	±0.91
	OVERALL	-95.94	±1.50	-89.44	±1.18